

## Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.



Region  
5



KODACHROME SLIDES \* REGION 5

Furnished by Harold J. Swan, Head, Regional Current Information Section

Note. These slides are not made from negatives on file and colored, but are original color pictures, the film bound between glass.

1. Otto Oukroup, dairy farmer near Dickinson, North Dakota, who has found that contour strip cropping has stopped his wind and water erosion troubles, increased his yields, and reduced his operating costs. *slide 351*
2. Contour strip cropping to control wind and water erosion in the less humid areas in western Nebraska and eastern Wyoming. This farmer raised a crop in years when his neighbors who did not follow conservation practices produced little or nothing. He previously saw soil washed away and crops blown out, and saw crops wither from moisture shortages caused by letting the rain and snow water waste. *slide 352*
3. This is a view of Devil's Tower, one of the scenic oddities in eastern Wyoming, just west of the Black Hills of South Dakota. *slide 353*
4. A beaver dam holding a stream in check and maintaining the water level. Before the beaver were planted here, the farmer was confronted with a severe bank erosion problem. The beaver have done an excellent job. *slide 354*
5. This stock water pond makes usable a pasture which formerly was too far from water. As a consequence, pasture near the existing water supplies was over-utilized, while other grass was practically untouched. Construction of this dam, and others like it, has brought better distribution of livestock, more uniform grazing, and increased carrying capacity without over-utilization. *slide 355*





219325 (Forestry)  
Lower falls of Little  
Bitterroot River. Clear,  
abundant, and steady stream  
flow from forest-protected  
watershed. MONTANA





A-Mont-26

7-30-38

Contour strips in the immediate foreground were 6 rods wide, the irregular area between the strips being taken up by grass buffers. On both sides of the farm may be noted a system of pasture terraces. Wind erosion had been severe, as the soil was light and fine, and it was planned to retire the land to permanent grass for pasture. Mr. Fryhling owned and operated an additional 80 acres not shown in this picture, but which were also laid out in contour strips.





Mont-3510 Musselshell County 6-14-39  
 A convenient watering place in this pasture made it unnecessary for this herd of registered Hereford cattle to go far for water. The owner of the cattle, J. A. Kenninger, is shown here looking at them as they pastured on land near a fenced-in wildlife area established around the dam he built for stock watering purposes. 12 miles northwest of Roundup, Montana.





MONT-5020. Roosevelt County, Montana; 12-18-36.

Shows strip cropping east and west and up and down the slope. This practice is bad from both the wind and water erosion standpoint.

The soil type is  $\frac{2R-L}{4B-L95}$

(colored slide)  
Slide E-26





16-49

Boone County, Nebraska

In the background can be seen extensive sheet erosion which is shown by the light spots in the background of the picture and the formation of fingerlike gullies. Also, in the distant background can be seen what appear to be furrows running at nearly right angles to the lister ridges. Placing these furrows in a lister planted cornfield is a common practice of farmers to try to prevent water running down the lister furrow on steeper slopes. Their intention is to divert the water diagonally down across the slope and, incidentally, it is one method that encourages gully formation. Located on the Vern Michael farm.





16-130. Nebraska.  
EROSION - Gully.

A deep and active gully advancing up the slope into the barnyard. This gully will be sloped, planted to trees, and an interception ditch constructed at the head. Same gully shown in 16-122. Nance County, Nebraska.





16-181 - Albion, Nebraska.  
EROSION CONTROL - Contour Listing.

Good view of series of contour terraces just completed. This farm  
will be contour listed this fall to conserve all moisture possible.  
SW $\frac{1}{2}$  Sec 29 twp 19 R 6.



16-310 - Nebraska  
EROSION CONTROL - Terraces

Level terrace holding an enormous amount of runoff water. The width of this channel will average 12 feet for a distance of approximately one half mile. Approximately 2,370 barrels of water have been held behind this terrace. This collection of water is the result of a rapidly melting snow.

(colored)  
Slide B-71<sup>u</sup>





16-392. Boone county. A series of level terraces on a slope nearly full of water following a 3" rain. Active sheet erosion has been prevented as well as holding the runoff water on the land.

(Colored)  
Slide C-89



16-440

Nance County, Nebraska

A cultivated field with a slope too steep to terrace. It should be in pasture. The field was in corn last year, and with no protective covering through the winter, and was subject to severe wind erosion during the early spring. The silt deposit in the foreground is the result of wind and spring rains did the rest.





Neb-229. Nebraska.  
EROSION CONTROL - Listing.

Blank basin listing on the contour.



Neb-237. Nebraska.  
EROSION - Silt.

Wind blown silt ruining a formerly cultivated field.





Neb-270

Richardson County

2-10-37

Field, basin listed on contour. Originally there was snow on the field, but it thawed, leaving water in the 8-foot-long basins. During the night, it would freeze, and the next day, the thawing of ice and absorption of the water would continue. Although no exact figures are available, it is safe to say that there was almost no run-off on this field during the winter months. H. M. Fishwood, tenant,  $5\frac{1}{2}$  miles east of Humboldt.



Enlargement #277



Neb-277

Trees are very effective in causing snows to drift and therefore preserve moisture.

Slide # 232<sup>cu</sup>



Neb-777      Otoe County      March, 1936  
Weeping Water Camp. Tree planting for gully control. Picture was made in March, 1936. Trees were planted shortly after. Progress picture to follow.



Neb-777-A      Otoe County      August, 1938  
Weeping Water Camp. Tree planting for gully control. "Before" picture was made in March, 1936. Trees were planted shortly after. The gully is now completely stabilized.







C-1002 - Nebraska.  
CROPS.

More than 500,000 pounds of this species was harvested by the nurseries in the vicinity of the Rosebud Indian Reservation in South Dakota.

This seed was concentrated at Crookston, Nebraska, and later shipped to the Soil Conservation Service Projects located in the Rocky Mountain and South Western States.





Nebraska-C-1005. Removing strippings from the hopper.





C-1008 - Nebraska.  
Grasses - Harvesting

Side view of new type power stripper.





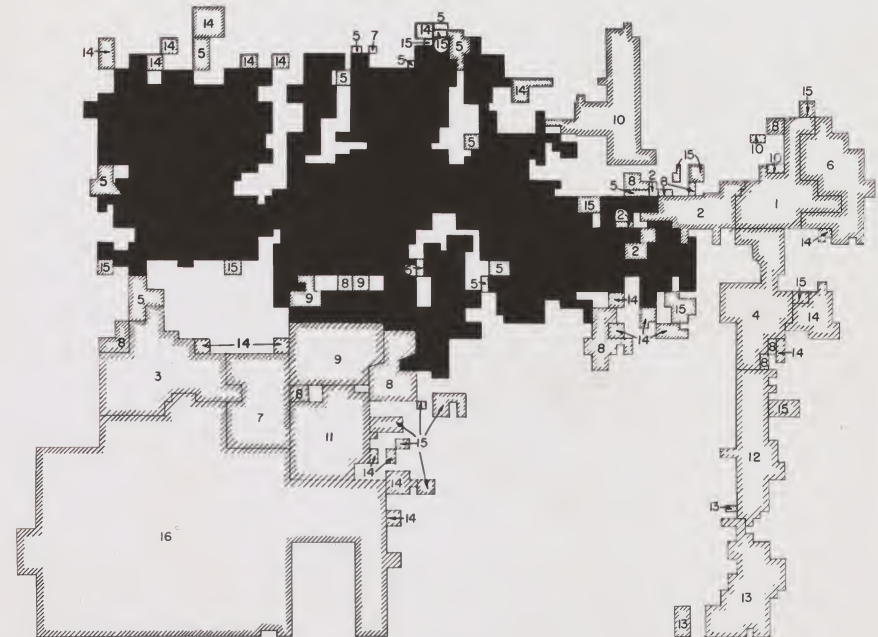
C-1010 - Nebraska.  
CROPS.

Western wheat grass (*Agropyron smithii*).  
Vast areas of western wheat grass were available for seed  
harvest in the prairie sections of Nebraska and Dakota in  
the past season. Most of the wheat grass was found as vo-  
lunteer on areas of crop land that had been abandoned.



Enlargement. 25% c

# TURKEY CREEK SOIL CONSERVATION DISTRICT NEBRASKA



## LEGEND

ORIGINAL DISTRICT  
(62,165 ACRES)

1ST PETITION FOR ADDITION  
9-20-39

2ND PETITION FOR ADDITION  
10-12-39

### SUBSEQUENT ADDITIONS

3RD PETITION --- 11-17-39	8TH PETITION --- 4-23-40	13TH PETITION --- 6-26-40
4TH PETITION --- 11-20-39	9TH PETITION --- 4-23-40	14TH PETITION --- 8-13-40
5TH PETITION --- 11-21-39	10TH PETITION --- 5-24-40	15TH PETITION --- 11-1-40
6TH PETITION --- 12-1-39	11TH PETITION --- 6-14-40	16TH BY REFERENDUM 4-26-40
7TH PETITION --- 3-14-40	12TH PETITION --- 6-17-40	(162,369 ACRES)

5 LATER PETITIONS FOR ADDITION OF APPROXIMATELY 22,000 ACRES IN PROGRESS.

C-5325  
Turkey Creek Soil Conservation District,  
Nebraska.

C-5325

Slide # 210 u



TABLE 1. Effect of straw and different tillage treatments on the storage of water in the soil near Lincoln, Neb.

Plot:	Treatment	:Part of 17.9 ins.:Depth :of rainfall con- :of Water :served <sup>3</sup> :Pen'tion
:	:	:Sur. ins.:percent: feet
1	:Straw, 2 tons disked in	: 6.9 : 38.7 : 5
2	:Land disked, no straw <sup>1</sup>	: 3.5 : 19.5 : 4
3	:Straw, 2 tons on surface : (subsurface tillage)	: : : : 6
4	:Straw, 2 tons plowed in	: 6.1 : 34.2 : 5
5	:Land plowed, no straw <sup>1</sup>	: 3.7 : 20.7 : 4
6	:Decayed straw, 2 tons plowed in:	: 3.1 : 17.4 : 4
7	:Basin-listed	: 4.9 : 27.7 : 5
8	:Bare unplowed <sup>2</sup>	: 1.2 : 6.9 : 2

1. Either plot 2 or 5 could be used as check, since both were kept free of vegetation by the usual practice of summer fallow. Probably plot 5 is preferable from the standpoint of farm practice.
2. Kept bare by taking off vegetation. This is not a farm practice and is only of technical interest.
3. Amount of rainfall Apr. 23 to Sept. 8, 1938.

C-9816

Table 1. Effect of straw and different tillage treatments on the storage of water in the soil near Lincoln, Nebraska.





C-8195

Lincoln, Nebraska

Packer at work on land covered with wheat  
residues.

June 12, 1940





C-8663

Lincoln, Nebraska

Fall sub tillage of corn land where corn made 104.4 bushels per acre. This is being done to increase absorption and prevent erosion from melting snow and early spring rains. This amount of residue should give perfect erosion control even on this 15% slope. Note that tiller works through this heavy residue without clogging.

Slide 370<sup>c</sup>





ND-135. Walsh County, North Dakota; 9-20-36.  
Strip cropping of potatoes and corn.





ND-5168

Bottineau County

9-11-38

This is how one of Art Vollmer's grain fields looked in September, 1938 after it was tilled with a disk harrow with 20-inch disks instead of the 16-inch disks. The stubble anchored in the loosened soil was designed to give protection against wind erosion and to hold snow on the field.

(Colored)  
Slide #75





60079

60079

Seed source studies at Lincoln, Nebraska. The blue grama rows shown were grown from seed obtained from: left to right, Okla., Colo., N. M., and Neb.





ND-7527. Walsh county. June 9, 1936. Daugherty Dam built in fall and spring of 1935-36 by SCS Camp No. 4. Earth fill with rubble masonry with paved shoot. Reservoir contains 135 acre feet maximum depth 15 feet fill contains 7500 yards.





ND-7547

Cass County

6-15-36

Green wing teal's nest along the banks of the Maple River.

(Colored)  
Slide E-89





ND-7558.

Barnes county. June 16, 1936. Wieland Dam Project No. 5, 1935.

(colored)  
Slide C-80





ND-7603

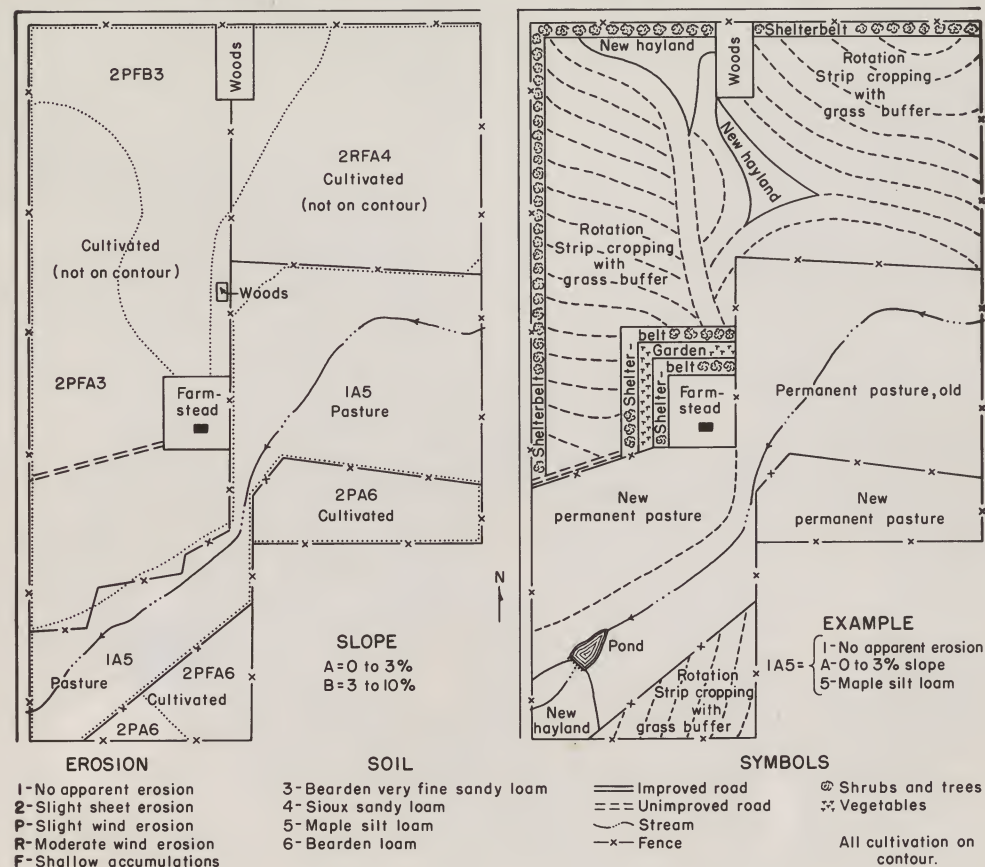
Cass County

9-14-38

Since it was planted in 1935, this contour tree windbreak on farm operated by William Guy 8 miles northeast of Casselton had made rapid growth by the end of the 1938 season. Plantings were done as part of erosion control program in cooperation with Fargo SCS CCC camp. Carrie T. Coffee Estate.



FIGURE: 200-ACRE FARM, OMEMEE, NORTH DAKOTA  
LAND USE BEFORE TREATMENT LAND USE AFTER TREATMENT





C-6371 1-24-39  
SD-2712 and ND-7547 combined.



(colored)  
Slide #64





A-SD-3

Beadle County

Summer, 1938

Constructed in fall of 1935, the Osmanson dam was designed to impound previously wasted water from a large artesian well flowing a stream 8 inches in diameter. 2 windbreaks of trees and shrubs were planted on east and west sides of dam in 1936 to provide wildlife food and shelter as protection from wind erosion to adjoining fields. Fair survival was obtained that year in spite of a severe drought which wiped out most tree plantings on project. 1937 and 1938 replantings met with better success and, when this was taken, there was almost a perfect stand. Native willow and aquatic plants had filled in to make an ideal site for wildlife. A fall, 1938, inventory of dam showed approx. 500 ducks of various species, 300 ring-necked pheasants, 20 black-crowned night herons, 800 red-winged blackbirds, 200 yellow-headed blackbirds, and numerous songbirds were occasional visitors. Partridges, prairie chicken, muskrats, and great blue herons were also seen. In 1937 dam was stocked with crappies and bullheads. SCS improvement operations were credited with this large wildlife population.

Slide # 237





A-SD-34

Tripp County

Spreckles Dam, N $\frac{1}{2}$  of Section 13-R74-T99, Winner-Dixon Soil Conservation Project, Winner, South Dakota. The pasture furrows were used on both sides of this stock watering dam completed June 2, 1937. A system of diversion ditches spread the overflow of water from the spillway over approximately 56 acres of hay land. This dam contained 46.3 acre feet of water, covering an area of 11.5 acres with a maximum depth of 15 feet. It was used for a stock watering dam, servicing about 480 acres of grass land.





A-SD-35

Tripp County

Spreckles Dam, N $\frac{1}{2}$  of Section 13-R74-T99, Winner-Dixon Soil Conservation Service Project, Winner, South Dakota. These spreader ditches gave excellent results to increasing yields in the native pasture composed chiefly of Western wheatgrass during the crop year of 1938 and the ditches functioned 3 times in 1938 and 4 times in 1939 up to August 1st. A yield of about 1 ton of hay per acre was secured in 1938 as estimated by the hay stacks. This yield is approximately 50 per cent greater than that on similar not-flood-irrigated land. The 1939 crop would no doubt exceed the yield for 1938.



Enlargement #51  
See also Enlargement #267  
SD-57 on one side  
SD-194 on other



SD-57 Director H. H. Bennett on the Karnstrum Farm showing soil drifts along road in front of house. Banks are about four feet high. The buildings on this farm cost about \$15,000, but the place is now abandoned. 9-22-35

(Colored)  
Slide E-52





SD-81 - South Dakota  
EROSION - Wind

Soil drifted in from a neighboring non-cooperative farm onto the Stegeman farm, filling in the listed furrows for an average distance of 80 feet from the fence. October 19, 1935

S.D.-127      Beadle County      5-2-36  
Effect of erosion on listed ground.



S.D.-191      Beadle County      8-11-37  
The effectiveness of cane and sudan grass as emergency cover crops seeded in cooperation with the Soil Conservation Service in stabilizing wind-eroded areas is illustrated by this photograph, taken on the Lena M. Jefferson farm 4 miles northeast of Wolsey, S. D., in early August, 1937. In the spring of 1936, the field shown here was blown down to the point that the sub-soil was exposed with rocks scattered on the surface despite emergency listing which had been done for control purposes. Partial stabilization was effected in 1936 by listing and broadcasting oats. In the late spring of 1937, the cane and sudan were listed in, and this good cover resulted, paving the way for permanent stabilization of the land.







SD-161. Beadle County, South Dakota; 11-27-36.

Basin Listing:- About ten acres of this 33 acre field were basin listed. The original plan was to ordinary list a similar area and the remainder was to be left untreated. This field is representative of many fields in this section. The land here is fairly rolling and will give an opportunity for studying moisture penetration on a number of different slopes. The distance between the dams in the listed furrows is about ten feet and the average height is from 6 to 8 inches. No part of this field was listed on the contour since the cooperator was not interested in contour farming at the time the work was done. Some row crop, probably corn will be planted next spring. It is likely that the fall listed land will be middle-busted in the spring. The chief advantage of basin listing above that of ordinary listing is that it profices a means of moisture conservation. The object of this experiment is to try out basin listing, ordinary listing, and the method which the cooperator intends using next spring side by side.



Enlargement #52  
See also Enlargement #267  
S.D-194 on one side  
S.D-57 on other



SD-194. South Dakota.

Cane and sudan grass, listed on the contour in cooperation with the Soil Conservation Service in the early summer of 1937, altered the landscape around this once prosperous farmstead--abandoned during the dust storms of 1935--from one of wind blown barrenness to rank crop growth. Four foot banks of drifted soil had accumulated around the \$15,000 worth of buildings in 1935. Record dry weather in 1936 interfered with control operations. This 1937 crop, representative of the vegetative control generally obtained on the farm, pointed the way to permanent stabilization and eventual reoccupation of the farm. (Before SD-57.)

(Colored)  
Slide E 51



Enlargement #69.



SD-2506 - South Dakota.  
EROSION - Wind.

Close up of a couple of squares made by the plow marks in the subsoil, which has been exposed by blowing.

(Colored)  
Slide B-49a



SD 2507 - South Dakota, Beadle Co, Oct 15 1935

The soil in this cornfield, which had been cut, is blowing out. Rye has been seeded in this field, but hasn't had the proper start because of lack of rainfall and is also being blown out. The adjoining field in which the corn is not cut, is not blowing out. The wind velocity when the picture was taken was about 26 M.P.H.





SD-2509 - South Dakota.  
EROSION - Wind.

Cut and uncut corn in the same quarter section as preceding picture. The soil in the cut-section (background) is unprotected and is blowing out rapidly. The soil in the uncut section (foreground) is protected and not being blown out. The wind velocity when this picture was taken was about 26 M.P.H.



SD-2510. Beadle County, South Dakota; 10-15-35.

Fence row drifts blowing out again parallel with fence. Russian thistles also blowing. Human figure (Caird) going south into the wind. The velocity of the wind is about 26 M.P.H. Small drifts can be seen in the foreground of the picture, showing the formation on the protected side of each Russian thistle.





SD-2603. South Dakota.  
EROSION - WIND.

Dust drifts along the south side of Lake Byron. Largest dust drifts about 10 feet high. Scott McMichael on dust bank to show relative size.



SD-2628. Beadle County, South Dakota; 2-19-36.

Corn field-filled in by snow. The corn was cut in the fall. The short stalks and weeds, such as Russian thistles have stopped considerable snow.

(Colored Slide)  
Slide E-30





SD-2690. Beadle County, South Dakota; 10-3-36.

This field was seeded in cane. The cane has been cut and shocked. The old seat from farm implement serves to illustrate the size of shock and height of the stubble left to protect the field from blowing. The cane was planted on listed blow land drilled in listed furrows in June. This same field is shown in SD-2685.

(Colored slide)  
Slide E-31



SD-5000 - South Dakota  
EROSION - Wind

View of back of farm buildings, showing dust piled up on one of them, which has been caved in by the weight of the drifts. The house is still furnished but not in use.





SD-5100. Tripp County; 6-1-36.

Water impounded in contour furrows 20 hours after 2.25 inch rain.





Wyo-29

Fremont County

7-11-36

Cooperator on horse in field of red top and timothy and Alsike clover. This field looked like pictures \_\_\_\_\_. This farm was purchased from the county for approximately \$400.00 and was known as the "Sand Pile." This farm has been changed from an abandoned sand pile to a farm well covered with permanent stand of mixed grass.

Wyo. 29



Wyo-138

Fremont County

8-29-37

Strips of tall-growing Sudan grass like this one on the E. C. Brines farm 13 miles northwest of Riverton, were planted in 1937 in cooperation with the Lander SCS project for fall and winter protection of adjacent soil against wind blowing. The Sudan strips were six feet wide, between 100-foot strips of sugar beets. In the irrigated district, this field was in beans in 1936 and planned for corn in 1938.

Enlargement #148





R9-Wyo-50

9-8-37

1 mile south, 6 east of Rock Eagle, Wyoming. This is an airplane view of a typical natural, shallow water hole in the Goshen Hole Soil Conservation Service erosion control area between Torrington and Wheatland, Wyoming. As a result of the proportionately large exposed water surface, evaporation is high, and water is provided for livestock only part of the year. It was planned to deepen a small area in this depression, to provide a more dependable water supply. Other water holes had been provided on this range in order to be able to move the cattle from a single concentration point in dry periods, and thus help to prevent continuation of the extreme erosion which may be seen as having resulted from too constant use of this area by the livestock.





Wyo-87

Fremont County

2-3-37

Looking up a gully that has been cut from an irrigation ditch due to improper control of irrigation water. This picture was made from the bottom of the main gully which is approximately 50 feet wide. About 20 acres of the 80-acre farm have been destroyed in this way in the past two years. This is on one of the Resettlement farms in this area.

Wyo-87



Wyo-10001

5-24-36

Badly water-eroded hill. The land in this region is very badly eroded, gullies and sheet erosion.

Enlargement # 151





Wyo-99

Fremont County

4-8-37

This view shows how wind erosion is building hummocks around the salt sage. No control work was planned for the field, but it was under observation to show what has happened over a period of time when no control is practiced. Photo Station No. 3.



Wyo-129

Fremont County

5-17-37

The main herd of sheep on the French permit in the spring of 1937 enjoyed much good grass like this, made available through stock water development in cooperation with the Soil Conservation Service. When this picture was taken, the herder was off of his horse segregating the ewes, with their lambs, out of the main herd.





Wyo-176

Fremont County

8-30-37

The effects of erosion under flood conditions are indicated by this picture, taken on Teapot Creek, four miles west of Shoshoni, in late August, 1937. Spring floods and excess irrigation drainage had widened this stream channel to approximately 100 feet; whereas a 30-foot bridge spanned it at this point until the 1937 season.





Wyo-184

Fremont County

8-28-37

The effect of water spreading in increasing grass growth in the Big Horn draw of the Lander SCS area near Riverton, Wyoming, is shown in this picture taken 2 miles north and west of Ethete, where the drainage empties into the Little Wind River. The more luxuriant, greener grass, chiefly western wheatgrass and grama, out from the spreader ditches where the water extended, is plainly noticeable in the photograph, after summer rains.



Wyo-150

Fremont County

7-13-37

This picture shows both the manner in which water is spread on the range land of the Big Horn drainage in the Lander SCS proj. area thru a system of combination stock water and water spreading dams & the direct results thereof. Here the water has backed up from the small spreader dike, covering the entire area behind the dike, itself one of a network of spreader structures to distribute overflow water from the spillway of approx. 50 dams. Note the good growth of grass displacing sage, chiefly western wheatgrass & blue gramma, as far as the water spreading line reaches. This & even a better growth was typical over hundreds of acres in the Big Horn area when this picture was taken, despite the fact that less than a year earlier sage and sparse, dry vegetation predominated over most of the drainage. Division of the range into summer, spring and fall and winter grazing areas gave the grass full opportunity to reseed and not be overgrazed.

Enlargement # 152



See Enlargement #152  
Composite with  
Wyo-184 and Wyo.150



Wyo-184

Fremont County

8-28-37

Effect of water spreading in increasing grass growth in the Big Horn draw on Lander Soil Conservation Service area near Riverton, Wyoming, is shown in this picture taken 2 miles north and west of Ethete, where the drainage empties into the Little Wind River. The more luxuriant, greener grass, chiefly western wheatgrass and grama, out from the spreader ditches where the water extended, is plainly noticeable in the photograph, taken after summer rains.

Slide # 220<sup>cu</sup>



Wyo-186

Fremont County

8-29-37

This killifer chisel, with a "mole" attachment for opening up the soil 3 to 4 feet below the surface was used by the SCS in 1937 in the Riverton irrigated section. The metal, torpedo-shaped device is drawn behind the chisel share and leaves a tunnel. The tunnels made by the "mole", which is approx. 16 inches long and 10 inches in diameter, are run down grade to a waste ditch or other outlet. The implement was tried on fields needing loosening, draining and aerating, in order to make them ready for applying crop rotations worked out in cooperation with the Service. It was intended that the tunnels, which may be farmed over, should remain open several years.





Wyo-190

Fremont County

8-29-37

This two-year field windbreak planted in cooperation with the Soil Conservation Service on the John Doughty place six miles east of Riverton, Wyoming had attained good growth and was in thrifty condition when this picture was made late in August, 1937. It consisted of caragana, Russian olive and Chinese elm.



Wyo-24

Fremont County

7-8-36

Tree plantings in sand arroyo or gully. Willow trees. In time these trees will hold the silt until the arroyo fills.





Wyo-240

Freemont County

5-13-38

This dust blowing is seen here around the farmstead on the R. E. Novotny place 17 miles northwest of Riverton, Wyoming. Note the limited visibility resulting from the soil movement. Novotny's plan was to put his entire farm into alfalfa.

Wyo-240



Wyo-2558

Goshen County

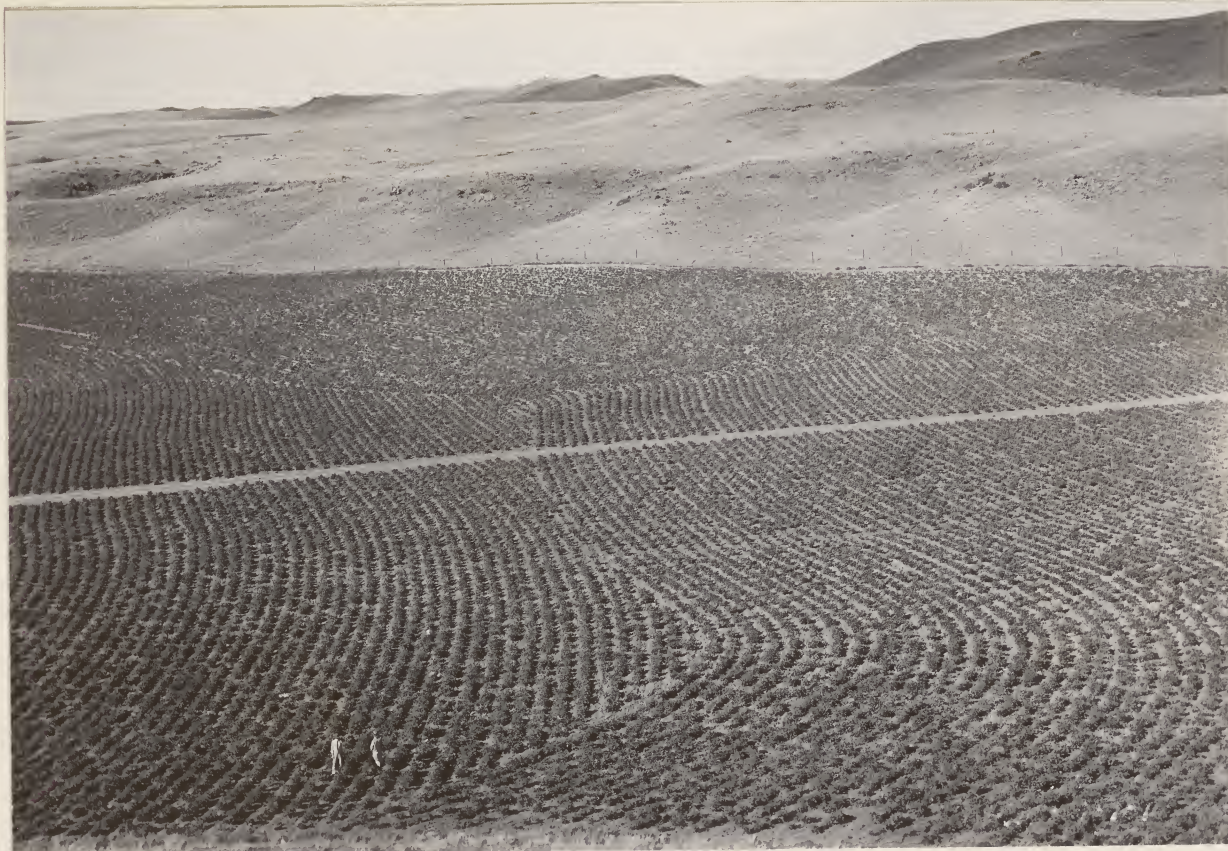
4-13-37

This dragline was at work on a Goshen Irrigation District lateral, removing "blow" soil accumulated during the winter of 1936-37 from dry land seeded to winter wheat.

Wyo-2558

Enlargement #149





Wyo-10101

Johnson County

9-15-38

John Kumer planted his certified seed potatoes on the contour on his farm 6 miles northeast of Buffalo, Wyoming. One of the level-tilled fields is shown here. This was one of the soil and moisture saving practices developed on the Kumer place as a demonstration farm unit in cooperation with the Soil Conservation Service and State Extension Service. Kumer reported that for the first time water failed to run off this field and down the draw past the house.





C-6069 (Jackson 278) 1870

Camp at Red Buttes, N. W. end of Casper Mountain, Natrona County, Wyoming. In foreground, luxuriant growth of valuable grazing plants in virgin condition, mainly western wheat grass (*Agropyron smithii*). Home of the present-day cover of sagebrush. Photograph by W. H. Jackson, official photographer, Hayden Expedition.

(Colored  
Slide D-82<sup>u</sup>)





C-6070

(Jackson 258)

1870

Luxuriant stand in 1870 of grama (*Bouteloua* sp.), western wheat grass (*Agropyron smithii*), and needle grass (*Stipa* sp.) on Great Plains near eastern base of Laramie Peak, Albany County, Wyoming. All these are valuable grazing plants. Note absence of present-day cover of sagebrush. Photographed by W. H. Jackson, official photographer, Hayden Expedition.





C-6072

(Jackson 270)

1870

Camp of the Hayden Expedition, 1870, on the Boxelder near the North Platte River, Converse County, Wyoming. A valuable forage cover of winter fat (*Eurotia lanata*), and grama (*Bouteloua* sp.) covers entire landscape. Sagebrush, the dominant plant today, does not appear in the plant cover. Photographed by W. H. Jackson, official photographer for the Hayden Expedition.





C-6073 (Jackson 249) 1870

Looking out over the Great Plains in 1870, Natrona County, Wyoming. Luxuriant stand of needlegrass (*Stipa* sp.), drop seed (*Sporobolus* sp.), grama (*Bouteloua* sp.), wheat grass (*Agropyron smithii*) -- all valuable grazing plants in virgin condition of plains. Note absence of sagebrush which today covers area. Photograph taken in 1870 by W. H. Jackson, official photographer, Hayden Expedition.





C-6074

(Jackson 305)

1870

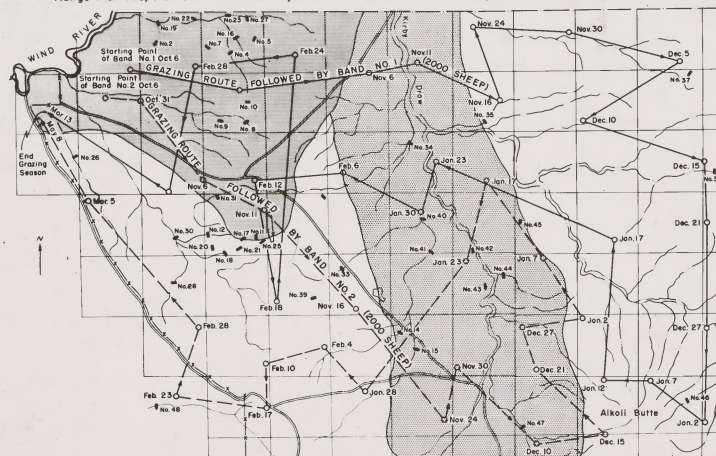
Camps of the 10th and 11th of September 1870 near Church Buttes, Uinta County, Wyoming. Note clear stream within its banks, and valley bottom covered with tall grass, unlike conditions today. Photograph by W. H. Jackson, official photographer of the Hayden Expedition.



# DEMONSTRATION OF RANGE IMPROVEMENT RIVERTON AREA, SHOSHONE INDIAN RESERVATION, WYOMING

44,801 ACRES

Range Plan Prepared and Carried Out by Soil Conservation Service in Cooperation with Bureau of Indian Affairs



## BEFORE IMPROVEMENT

- USE
- 3335 sheep from Sept. 15 to May 31, in addition to 508 trespass sheep. Use of much of area wholly dependent on water from snow on small temporary ponds, resulting in waste forage over parts of range, and severe overgrazing on other parts.
  - With Wind River furnishing the only permanent water on the entire range, the sheep were held on this area approximately 3 months, resulting in serious erosion and numerous overgrazed bedgrounds.
  - A few small water holes, cleaned out whenever used, allowed intermittent use of area during lambing season.
  - Without permanent water, nearly 60% of the range could be used only intermittently, when snow was available.

## AFTER IMPROVEMENT

- USE
- Survey of the soils, conditions of erosion, and amount, value, and distribution of the forage furnished the necessary basic information for the improved plan of management, and indicated, for each portion of the range, the proper period and intensity of use.
  - Entire area grazed by two bands of 2000 sheep each from early Oct. to April. Under improved management the carrying capacity has increased 25% in 3 seasons to 29736 sheep months. The present rate of stocking of 26000 sheep months should insure continued improvement on the range.
  - Dams for stock water and erosion control located throughout the area.
  - Route of Band No. 1 } With water available at regular intervals,  
Route of Band No. 2 } entire range is now uniformly grazed.
  - Camp and bedgrounds showing date of use. Salting place of bedgrounds.

8x10  
Jan 24, 1939